

(b) rejected claims 1-6, 14-16, and 18-20 as being obvious in view of French Patent Publication No. 2,405,625 ("France '625") in combination with Japan '076, and optionally further in view of either European Patent Application No. 255 795 ("EPO '795") or Japanese Patent Publication No. 76-048792 ("Japan '792");

(c) rejected claims 17, 21-27, and 29-38 as being obvious in view of the combination of European Patent Application No. 631 015 ("EPO '015"), France '625, and Japan '076, and optionally further in view of EPO '795 or Japan '792;

(d) rejected claims 26, 27, 30-33, and 35-38 under 35 U.S.C. § 112, first paragraph, as containing subject matter not in the specification;

(e) rejected claims 1-6, 14-16, and 18-20 under 35 U.S.C. § 112, second paragraph, for the use of the term "non-linear" where "non-twisted linear" appeared to be intended; and

(f) rejected claims 1-6, 14-16, and 18-20 for obviousness-type double patenting in view of claims 1, 3, and 11 of U.S. Patent No. 6,205,727 ("the '727 patent").

### ***The Amendments***

This amendment cancels all of the prior-pending claims in this reissue application and adds new claims 39-65.

New claims 39-58 are identical to claims 1-20 of U.S. Patent No. 5,670,007 ("the '007 patent"), the patent underlying this application. In essence, the reissue applicant has withdrawn the amendments made to the claims of the '007 patent during this reissue proceeding so that those claims can be reinstated as issued. New claims 59-65 comprise three groups.

First, claims 59 and 60 depend from new claim 39 (claim 1 of the '007 patent) and thus are no broader than the originally claimed subject matter. Claims 59 and 60 are directed to the current embodiment of the invention defined by claim 1 of the '007 patent, in which (a) the step

of providing non-twisted linear reinforcing elements includes providing a first mat of non-twisted glass strands and (b) the step of inserting a reinforcing layer includes providing a second mat of non-twisted glass strands between the first mat and the rear face of the slab, with claim 60 specifying that the second mat is coated with a resin. Clear support for these claims is provided in the specification of the '007 patent at column 3, lines 14-16, which states that “a particularly marked reinforcing effect” can be provided by adding to a first mat of non-twisted glass strands a second mat of glass strands impregnated with a bonding resin.

The second group of truly new claims comprises independent claim 61 and dependent claims 62-64. Claim 61 is similar to original 1 of the '007 patent, except that (a) the step of providing non-twisted linear reinforcing elements and the step of coating the elements with a resin are combined into a single step of providing a first layer of non-twisted elements coated with resin and (b) the step of inserting a reinforcing layer includes the steps of providing a second layer of non-twisted linear reinforcing elements coated with resin and applying the first and second layers to the rear face of the slab such that the second layer is between the first layer and the slab. Dependent claims 62 and 63 specify the non-twisted linear reinforcing elements as non-twisted glass strands and carbon fibers, respectively (the use of carbon fibers is disclosed in the specification at column 4, lines 32-33). Dependent claim 64 specifies that the resin is epoxy.

The final new claim, independent claim 65, harkens back to original claim 8 of the '007 patent (new claim 46 in this reissue application) by including the step of forming grooves or recesses on the rear face of the slab. Similarly to new claim 61, claim 65 recites a single step of providing a first reinforcing layer of non-twisted elements coated with resin. The analog to the inserting step of original claim 8 is the combination of providing a second reinforcing layer of

linear reinforcing elements and applying the first and second reinforcing layers to the rear face of the slab, with the elements of the first reinforcing layer being disposed in the grooves or recesses.

***Patentability of New Pending Claims Under the Recapture Rule***

The reissue applicant submits that the new claims presented by this amendment are not subject to rejection under the recapture rule. As claims 39-58 are identical to originally issued claims 1-20 of the '007 patent, there clearly can be no recapture issue. As to claims 59-65, they all include a recitation of adding a reinforcing layer in the form of a second layer of linear reinforcing elements. Accordingly, these truly new claims do not attempt to recapture subject matter that the Examiner has asserted was surrendered, *i.e.*, they do not attempt to broaden the claim scope by removing the reinforcing layer element.

With respect to the Examiner's application of the recapture rule to prior-pending claim 21, the reissue applicant respectively points out that issued claim 8 of the '007 patent (restated as new claim 46) recites the method of issued claim 1 (new claim 39) "wherein grooves or recesses are formed on said rear face of the slab and said linear reinforcing elements are housed in the grooves or recesses." There thus was no surrender of claimed subject matter in which the slab was **permanently** free of grooves or recesses. Accordingly, new independently claim 65, which positively recites the step of forming grooves or recesses on the rear face of a slab that originally was substantially free of grooves or recesses, cannot be subject to rejection under the recapture rule.

***Patentability of New Pending Claims Under the Prior Art***

Each of claims 39-65 recites a method in which one or more layers of **non-twisted** linear reinforcing elements coated with resin are applied to the rear face of a stone slab. The prior art

references applied by the Examiner in rejecting previously rejected claims, however, do not disclose this feature of reinforcing the slab with **non-twisted** linear reinforcing elements.

The Examiner's particular attention is directed to paragraph [0021] of the machine translation of Japan '076, recalling that this reference was cited alone in rejecting prior-pending claims in which the slab was reinforced by a layer of non-twisted linear reinforcing elements. The machine-generated translation makes repeated reference to twisting, pushing, and crushing the reinforcing fibers 2. A more cogent English translation of Japan '076 is submitted with this Amendment. This translation clarifies that this paragraph (spanning pages 11 and 12 of the translation) describes the manner of forming the single-direction-orientation reinforcing fibers 2 of Japan '076.

[0021] The reinforcing fibers 2 are obtained by converging filaments into fiber bundles by means of a converging agent or of a slight twisting thereof. Those bundles are lined up, and adhered, slightly scattered thereamong, onto the adhesive layer 6' by means of a downward pressure applied in several layers by means of a twisting or converging agent and oriented in one direction, are adhered onto the supporting sheet by means of an adhesive layer 6'. Thus, the desired reinforcing fiber sheet 1 is obtained.

Each of the reinforcing fibers used in the method disclosed by Japan '076 therefore comprises a bundle of filaments that are not specified as being non-twisted, and the reference discloses that a preferred method of forming the bundles is to twist the filaments. The reissue applicant submits that Japan '076 fails to disclose reinforcing a stone slab with **non-twisted** linear reinforcing elements and, indeed, that this primary reference actually teaches away from using non-twisted linear elements.

To the extent the Examiner was relying on Japan '076's disclosure of the reinforcing fibers 2 being "arranged in one direction" or "oriented in one direction" in support of his

contention that the reference disclosed non-twisted linear reinforcing elements, the quoted language reasonably should be taken as meaning nothing more than that the fibers are disposed substantially parallel to each other. There is no teaching in Japan '076 of using non-twisted linear reinforcing elements.

The other prior art references cited by the Examiner in rejecting previously pending claims in connection with this application also fail to disclose the use of **non-twisted** linear reinforcing elements to reinforce a stone slab. The France '625 reference discloses a mesh fabric of synthetic fiber. The EPO '795 reference discloses using “resin glass cloth” to reinforce stone slabs and specifies three types on page 6: (a) “casually distributed fiber-glasses;” (b) “crossed equally thick fiber-glasses;” and (c) “longitudinally unequally thick fiber-glasses.” Similarly, Japan '792 speaks only of “glass fibre textile.” EPO '015 discloses a fiber-reinforced grid 16 of substantial depth. EPO '714 discloses a reinforcing sheet 52 that may be formed from fiberglass in the form of a non-woven textile. None of these references provides any suggestion of using non-twisted linear fibers.

These references teach nothing more than the prior art described in the background section of the '007 patent, which details various attempts “to reinforce thin slabs of natural-stone material by applying to their rear face . . . reinforcing elements, in the form of metal or glass-fibre or plastic grids, which are affixed to the aforementioned rear surface of the slab by means of a synthetic resin.” Column 2, lines 1-8. Neither the prior art discussed in the issued patent nor that applied by the Examiner teaches the discovery that underlies the claims being asserted here: the use of non-twisted linear reinforcing elements bonded to the rear face of the slab. *See* column 2, lines 60-64. Each of the claims currently pending includes this feature and therefore is patentable over the prior art of record.

***§ 112 and Double-Patenting Rejections***

The reissue applicant submits that the § 112 rejections in the April 17, 2002 Office Action have been obviated by the new claims.

With respect to the double-patenting rejection based on U.S. Patent No. 6,205,727, the reissue applicant points out that the '727 patent issued from an application having an effective filing date in 1997, over eighteen months **after** the filing date of the application underlying the '007 patent and this reissue application. The reissue applicant is at a loss to understand how claims being pursued in this proceeding can unfairly extend any exclusive rights, as any claims issuing from this proceeding would be subject to expiration well before the claims of the '727 patent. Accordingly, the reissue applicant respectfully traverses the Examiner's double-patenting rejection and submits that it should be withdrawn.

\* \* \*

In view of the foregoing, the reissue applicant submits that new claims 39-65 meet the requirements of 35 U.S.C. § 251 and otherwise are patentable over the prior art applied by the Examiner. Accordingly, the undersigned respectfully requests withdrawal of the rejections and issuance of a Notice of Allowance for this application.

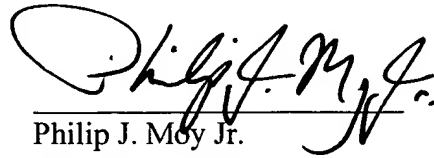
The reissue applicant has petitioned for a three-month extension of time under 37 C.F.R. § 1.136 and has requested that both the extension fee and the fee required for the addition of claims in excess of twenty be charged to Deposit Account No. 06-0308. If there are any other

fees due in connection with the filing of this response, please charge those fees to Deposit  
Account No. 06-0308.

Respectfully submitted,

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Enclosure: English translation of Japanese Patent Publication No. 6-64076